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ABSTRACT

A research project was conducted in 1982 by Sacramento City College's Assessment Center to evaluate the effectiveness of selected English courses found in three levels of English: English 55 and 56 (the lowest level); English 57 (level two), and English 1A (level three). The study focused on students who had reading and English scores required for placement in the respective classes and were found to be properly placed in their English courses through promotion and/or assessment. Research findings included the following: (1) 69.77% of the students promoted into English 56 after successful completion of English 55 received a C or better, while 78.01% of those placed directly into the course received a C or better; (2) 83.02% of those promoted into English 57 received at least a C, compared to 81.74% of those placed directly; (3) 77.42% of the students promoted into English 1A and 81.39% of those placed directly into the course received a C or better; (4) while the average grade of those promoted into English 57 equaled the average grade of those placed directly, for English 1A, the average grade of the promoted group was significantly lower than the direct-placement group; (5) when the test of proportions was applied, those promoted and those placed directly had the same chance of receiving a C or better in all three course levels; and (6) students directed into lower-level English courses usually had a lower grade point average. (LL)

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SACRAMENTO CITY COLLEGE
Assessment Center
April 25, 1983

A STATISTICAL EVALUATION OF THE EFFICACY OF SELECTED ENGLISH COURSES

M. Haase and Steve Magee

The Center conducted an intensive research project in 1982 in order to evaluate the effectiveness of selected English courses found in the three levels of English. These levels contain English 55 and 56 which are in the learning skills content area, level two which includes English 57 the pre 1A course, and the highest level (three) represented by English 1A.

For the first time the Center has been able to depict a statistical representation of the reading and English scores for all students enrolled in English 56, 57 and 1A in Fall 1981. A definition of terms used in the statistical presentation is found in Table 1, page 5.

Histograms of the reading and English scores have been constructed for English 57 and English 1A. The results may be found in Tables 3 - 6. The information was used to construct graphs which reveal range of scores and number of students receiving those particular scores.

The Center, had access to a computer and consultant services for part of its statistical research. This was made possible by the cooperative efforts of Steve Magee and James Gehrmann of California State University, Sacramento and Gene Sellers of Sacramento City College.

The statistical interpretation of the grading processes used by the English 56, 57 and 1A classes are included in this report and may be found in Tables 2A thru Tables 2H, pp. 6 to 13.

The data base in all instances included students who had the reading and English TASK scores for placement in the respective classes and those who were properly placed in classes either through promotion and/or assessment.

The percentage of students who passed English 55, were promoted into English 56, and then completed the class with a "C" or passing grade or better equaled 69.77%. The percentage of students who were placed directly into English 56 through assessment and then completed the class

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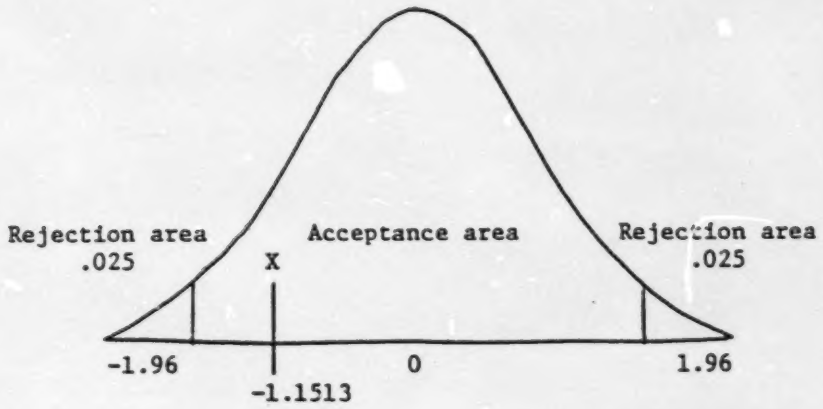
with a "C" or passing grade or better equaled 78.01%. This 8.24% difference may reflect the wide range of students needs in English 55 and reduces the number of students who can proceed directly into English 56.

In other words it was found that students below the 9th grade average reading level often have to repeat the lowest level English course (55) before their composition skills are sufficient to permit them to mainstream and proceed up the curriculum ladder.

When the test for proportions was applied to the raw data, it was found that both groups have the same chance of passing English 56 with a "C" or passing grade.

TEST FOR PROPORTIONS - ENGLISH 56 FALL 1981

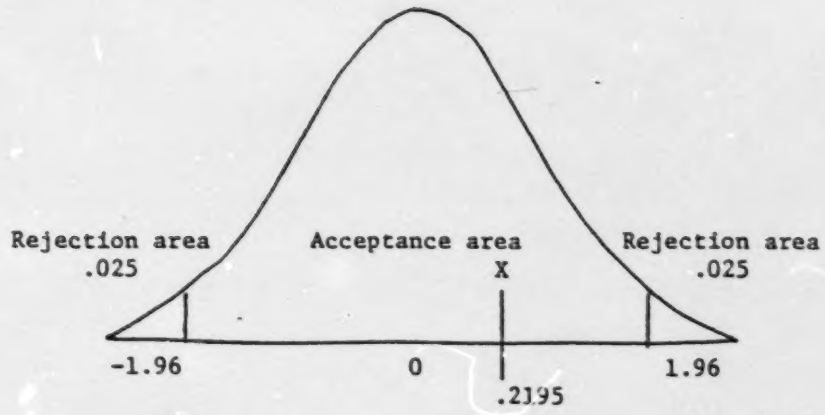


Another comparison was made between students who were directed into English 56 before entering English 57 with those who entered English 57 through direct assessment.

The percentage of students who passed English 56 and were promoted into English 57 and received a grade of "C" or better in English 57 totaled 83.02%. The percentage of students who were placed directly into English 57 and received grades of "C" or better in English 57 totaled 81.74%.

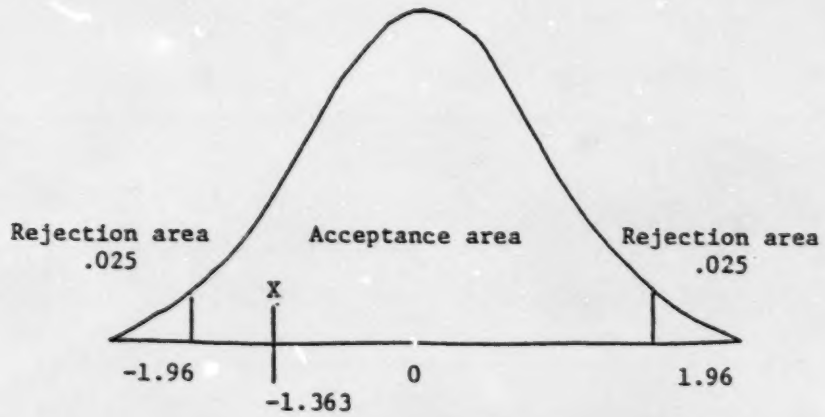
When the test for proportions was applied to the raw data, it was found that both groups have the same chance of passing English 57 with a grade of "C" or better.

TEST FOR PROPORTIONS - ENGLISH 57 FALL 1981



The proper statistical "T" Test revealed that the average grade of those students who were promoted into English 57 (2.1132) does equal the grades of those students who entered English 57 directly (2.3112). Both groups came from a statistically defined normal distribution.

"T" TEST FOR GRADE AVERAGE - ENGLISH 57 FALL 1981

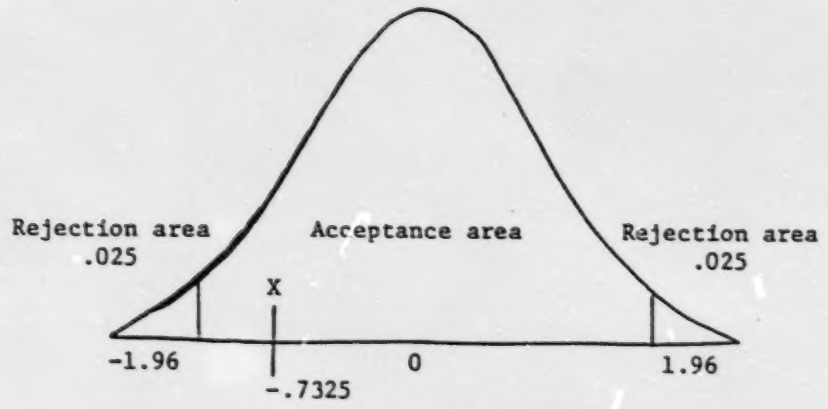


The observable differences between the success rate of students reflect the ability of English 56 to impart competency skills to students; but it may be necessary to raise the English 57 cut-off levels slightly to bring both groups closer together in competencies.

The percentage of the promoted group who went into English 1A and achieved a "C" or better grade was 77.42%. The students who were placed directly into English 1A through assessment achieved a "C" or better grade 81.39% of the time.

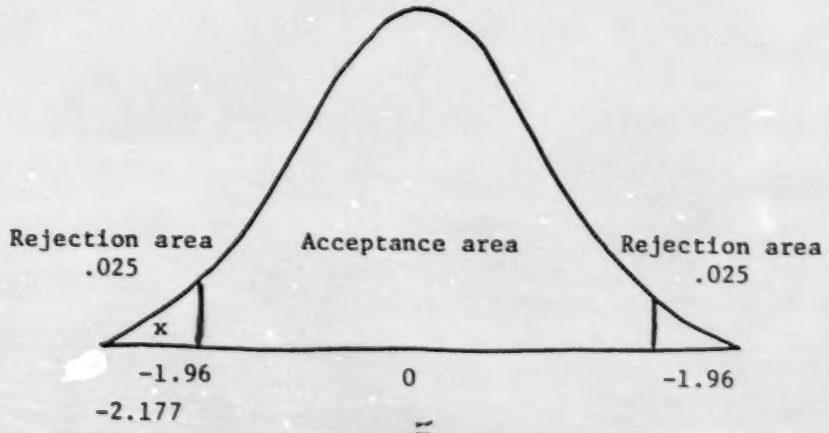
When applying the Test for Proportions, it was found that both groups have the same chance of passing English 1A with a "C" grade or better.

TEST FOR PROPORTIONS - ENGLISH 1A FALL 1981



When the proper statistical "T" Test score was applied to the raw data base it was found that the average letter grade for those students who were promoted into English 1A (2.0806) does not equal the average grade for those students who were placed directly into English 1A (2.3944).

"T" TEST FOR GRADE AVERAGE - ENGLISH 1A FALL 1981



These tests tend to substantiate the hypothesis that students who are directed into lower level English classes in order to bring up their competency skills will usually receive, with some minor exceptions, a lower grade average in these classes. One may find the grade distributions for English 57 and 1A and other statistical support information on Tables 1 and 2.

The research subsequently proved that both groups came from a normal distribution.

TABLE 1
DEFINITION OF TERMS
USED IN STATISTICAL PRESENTATION

Middle of Internal = raw scores

Number of Observation (N) = frequency of occurrence of student scores

Middle of Internal (0) = F letter grade

(1) = D " "

(2) = C " "

(3) = B " "

(4) = A " "

Cl = Used to represent a specific class by instructor in each data group. 1st by mean and Standard Deviation and then by band of grades awarded.

Pooled standard deviation - represents the standard deviation for the entire population of each class.

I = Mean for each specific class. Outer markers (I) indicate the ranges in internal estimates for the mean. (In the instance of the data for English 57 (Table 6A) and for English 1A (Table 6B) the extension of the confidence internals (I) beyond 4.0 ("A" grade designates) is the result of low student numbers in the data base.)

TABLE 2A

CLASS MEAN CONFIDENCE INTERVALS FOR
ENGLISH 57 CLASSES

FALL SEMESTER 1981

LEVEL	N	MEAN	ST. DEV.
C1	24	3.04	0.36
C2	27	2.70	1.20
C3	28	2.11	0.99
C4	12	1.67	1.15
C5	24	1.92	1.02
C6	20	2.20	0.70
C7	22	2.05	1.09
C8	11	3.09	0.54
C9	18	2.83	0.62
C10	23	2.22	0.74
C11	11	1.27	1.01
C12	15	2.13	1.06
C13	26	1.46	1.33
C14	18	2.33	1.28
C15	11	1.55	1.21
C16	28	2.25	0.84
C17	15	2.13	1.68
C18	12	2.67	1.15

POOLED ST. DEV. = 1.03

INDIVIDUAL 95 PERCENT C. I. FOR LEVEL MEANS
(BASED ON POOLED STANDARD DEVIATION)

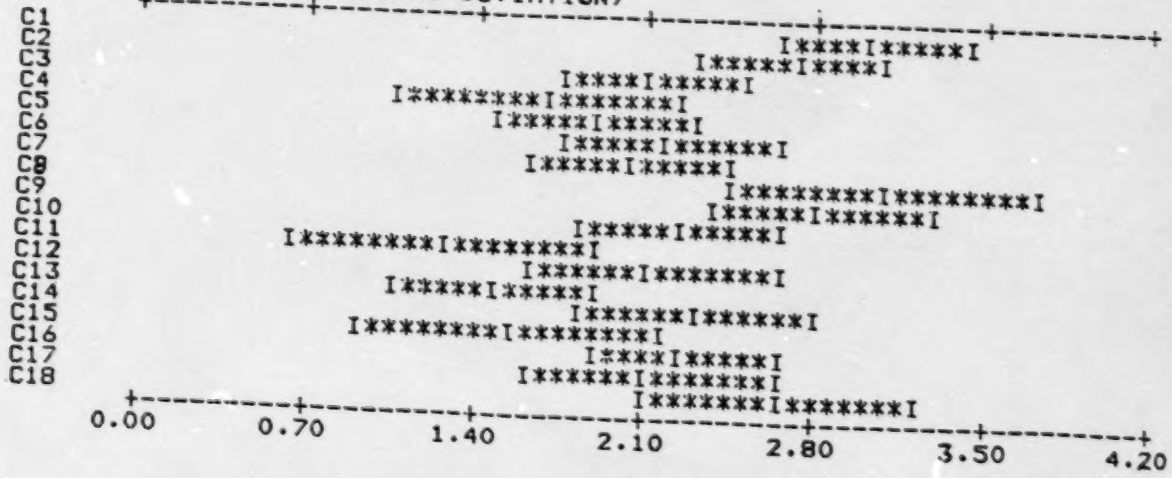


TABLE 2B

CLASS MEAN CONFIDENCE INTERVALS FOR
ENGLISH 1A CLASSES

LEVEL	N	MEAN	ST. DEV.
C1	14	1.93	1.59
C2	10	2.20	0.42
C3	24	2.50	1.29
C4	18	2.56	0.98
C5	13	2.23	1.54
C6	18	1.50	0.86
C7	25	1.92	1.00
C8	27	2.26	0.86
C9	4	2.50	0.58
C10	21	2.33	0.58
C11	13	2.23	0.83
C12	15	1.93	1.10
C13	28	2.46	1.40
C14	20	2.85	0.81
C15	14	2.64	1.55
C16	3	3.00	1.00
C17	17	2.06	1.25
C18	14	1.79	1.42
C19	22	2.23	1.27
C20	21	1.81	0.87
C21	14	1.43	1.22
C22	11	3.64	0.50
C23	8	2.25	1.49
C24	19	3.53	0.77
C25	26	1.81	1.33
C26	20	3.15	0.93
C27	15	2.53	1.30
C28	6	1.67	1.37
C29	22	3.14	0.99
C30	22	2.18	1.47
C31	17	2.41	1.12

POOLED ST. DEV. = 1.14

INDIVIDUAL 95 PERCENT C. I. FOR LEVEL MEANS
(BASED ON POOLED STANDARD DEVIATION)

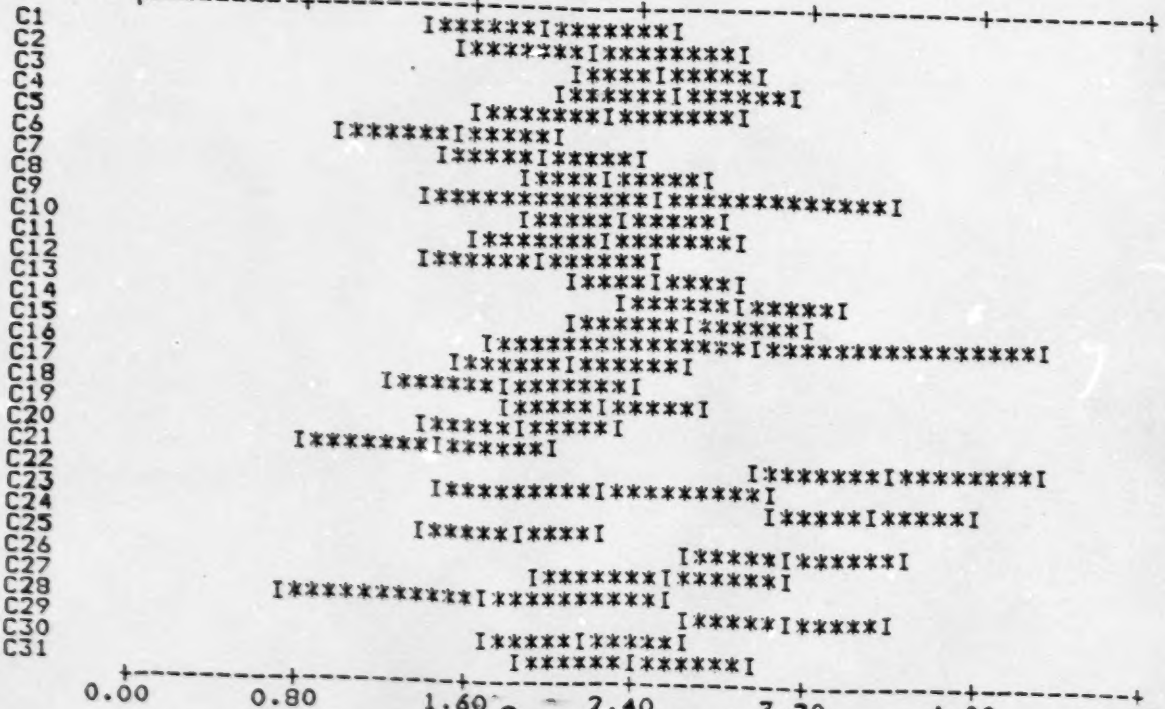


TABLE 2C

HISTOGRAM OF THE READING SCORES
OF STUDENTS PROMOTED INTO ENGLISH 57

FALL SEMESTER 1981

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
15.	1	*
20.	0	
25.	1	*
30.	1	*
35.	3	***
40.	5	*****
45.	9	*********
50.	8	********
55.	12	************
60.	4	****
65.	1	*
70.	1	*

N = 46 MEAN - 47,935 ST. DEV. = 10.2

HISTOGRAM OF THE READING SCORES
OF STUDENTS PLACED DIRECTLY IN ENGLISH 57

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
48.	2	**
50.	10	**********
52.	21	**********************
54.	29	*****************************
56.	33	*********************************
58.	29	*****************************
60.	24	************************
62.	16	****************
64.	20	********************
66.	17	*****************
68.	13	*************
70.	12	************
72.	8	********
74.	4	****
76.	3	***

N = 241 MEAN = 59,473 ST. DEV. = 6.38

TABLE 2D

HISTOGRAM OF THE READING SCORES
FOR STUDENTS PROMOTED INTO ENGLISH 1A

FALL SEMESTER 1981

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
44.	1	*
46.	2	**
48.	1	*
50.	5	*****
52.	8	********
54.	4	****
56.	6	******
58.	10	**********
60.	7	*******
62.	9	*********
64.	2	**
66.	0	
68.	4	****

N - 59 MEAN = 56,390 ST. DEV. = 5.7

HISTOGRAM OF THE READING SCORES
FOR STUDENTS PLACED DIRECTLY INTO ENGLISH 1A

FALL SEMESTER 1981

EACH * REPRESENTS .2 OBSERVATIONS

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
50.	0	
52.	1	*
54.	0	
56.	11	******
58.	2	*
60.	27	**************
62.	35	*****************
64.	54	**************************
66.	35	*****************
68.	55	***************************
70.	41	********************
72.	42	*********************
74.	32	****************
76.	20	**********
78.	4	**

N = 359 MEAN = 66,855 ST. DEV. = 5.20

TABLE 2E

HISTOGRAM OF THE ENGLISH SCORES
FOR STUDENTS PROMOTED INTO ENGLISH 57

FALL SEMESTER 1981

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
15.	1	*
20.	0	
25.	3	***
30.	3	***
35.	5	*****
40.	11	**********
45.	15	***************
50.	4	****
55.	4	****

N = 46 MEAN = 41,022 ST. DEV. = 8.25

HISTOGRAM OF THE ENGLISH SCORES
FOR STUDENTS PLACED DIRECTLY INTO ENGLISH 57

FALL SEMESTER 1981

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
47.	18	******************
48.	16	****************
49.	21	*********************
50.	20	********************
51.	18	******************
52.	24	************************
53.	16	****************
54.	13	*************
55.	16	****************
56.	8	********
57.	18	******************
58.	13	*************
59.	5	*****
60.	9	*********
61.	5	*****
62.	9	*********
63.	9	*********
64.	2	**
65.	1	*

N = 241 MEAN = 53,631 ST. DEV. = 4.69

TABLE 2F

HISTOGRAM OF THE ENGLISH SCORES
FOR STUDENTS PROMOTED INTO ENGLISH 1A

FALL SEMESTER 1981

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
25.	1	*
30.	0	
35.	1	*
40.	4	****
45.	13	*************
50.	21	*********************
55.	11	***********
60.	6	******
65.	2	**

N = 59 MEAN = 49.949 ST.DEV. = 6.92

HISTOGRAM OF THE ENGLISH SCORES
FOR STUDENTS PLACED DIRECTLY INTO ENGLISH 1A

FALL SEMESTER 1981

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
52.	1	*
53.	9	*********
54.	14	**************
55.	18	******************
56.	28	****************************
57.	31	*******************************
58.	24	************************
59.	32	********************************
60.	32	********************************
61.	41	***
62.	23	***********************
63.	23	***********************
64.	32	********************************
65.	17	*****************
66.	21	*********************
67.	8	********
68.	4	****
69.	1	*

N = 359 MEAN = 60.173 ST.DEV. = 3.76

TABLE 2G

HISTOGRAM OF GRADES
FOR STUDENTS PROMOTED INTO ENGLISH 57

FALL SEMESTER 1981

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
0.	5	*****
1.	4	****
2.	24	************************
3.	20	********************

N = 53 MEAN = 2.1132 ST.DEV. = 0.913

HISTOGRAM OF GRADES
FOR STUDENTS PLACED DIRECTLY INTO ENGLISH 57

FALL SEMESTER 1981

EACH * REPRESENTS 5 OBSERVATIONS

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
0.	31	*******
1.	13	***
2.	71	**************
3.	102	**********************
4.	24	*****

N = 241 MEAN = 2.3112 ST.DEV. = 1.14

0 = F

1 = D

2 = C

3 = B

4 = A

TABLE 2H

HISTOGRAM OF GRADES
FOR STUDENTS PROMOTED INTO ENGLISH 1A

FALL SEMESTER 1981

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
0.	6	******
1.	8	********
2.	26	**************************
3.	19	*******************
4.	3	***

N = 62 MEAN = 2.0806 ST.DEV. = 1.01

HISTOGRAM OF GRADES
FOR STUDENTS PLACED DIRECTLY INTO ENGLISH 1A

FALL SEMESTER 1981

EACH * REPRESENTS 5 OBSERVATIONS

MIDDLE OF INTERVAL	NUMBER OF OBSERVATIONS	
0.	46	**********
1.	20	****
2.	112	**********************
3.	110	**********************
4.	72	**************

N = 360 MEAN = 2.3944 ST.DEV. = 1.23

0 = F

1 = D

2 = C

3 = B

4 = A

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Further information regarding research procedures and results is available by contacting M. Haase, Assessment Coordinator, Sacramento City College, 3835 Freeport Boulevard, Sacramento, California 95822.